

Claim Amendments

1. (currently amended) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate wherein one or more of said feature locations comprises degenerate biopolymers comprising nucleotides, said method comprising, in each round of multiple rounds of subunit additions, providing one or more biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, wherein, for one or more feature locations comprising said degenerate biopolymers, said biopolymer subunit precursors comprise a mixture of biopolymer subunit precursors for forming said degenerate biopolymers at said feature location.

2. (currently amended) A method according to Claim 1 wherein said biopolymers are polynucleotides ~~or polypeptides~~.

3. (original) A method according to Claim 1 wherein said degenerate biopolymers comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

4. (currently amended) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate wherein one or more of said feature locations comprise degenerate biopolymers comprising nucleotides, said method comprising:

in each round of multiple rounds of subunit additions, providing one or more biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, wherein, for one or more feature locations comprising said degenerate biopolymers, said biopolymer subunit precursors comprise a mixture of said biopolymer subunit precursors for forming said degenerate biopolymers at said feature location, each round of subunit additions comprising:

- (a) dispensing from a dispensing system said biopolymer subunit precursors to said discrete sites,
- (b) dispensing activator to said discrete sites, and
- (c) repeating steps (a) – (b).

5. (currently amended) A method according to Claim 4 wherein said biopolymers are polynucleotides or polypeptides.

6. (original) A method according to Claim 4 wherein said degenerate biopolymers comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

7. (original) A method according to Claim 4 wherein said biopolymers are oligonucleotides.

8. (original) A method according to Claim 4 wherein said dispensing system comprises at least one droplet dispensing device.

9. (original) A method according to Claim 4, which is a computer based method wherein steps (a) through (c) are carried out under computer control.

Claims 10-32 (canceled).

33. (new) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate wherein one or more of said feature locations comprise degenerate biopolymers comprising nucleotides, said method comprising:

in each round of multiple rounds of subunit additions, providing one or more biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, each round of subunit additions comprising:

(a) dispensing from a dispensing system said biopolymer subunit precursors to said discrete sites wherein, for one or more of said feature locations comprising said degenerate biopolymers, a mixture comprising a predetermined ratio of said biopolymer subunit precursors for forming said degenerate biopolymers is dispensed in a droplet manner at each of said feature locations comprising said degenerate biopolymers,

(b) dispensing activator to said discrete sites, and

(c) repeating steps (a) – (b) to form said plurality of biopolymers comprising nucleotides at predetermined feature locations on said surface.

34. (new) A method according to Claim 33 wherein said biopolymers are polynucleotides.

35. (new) A method according to Claim 33 wherein said degenerate biopolymers comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

36. (new) A method according to Claim 33 wherein said biopolymers are oligonucleotides.

37. (new) A method according to Claim 33 wherein said dispensing system comprises at least one droplet dispensing device.

38. (new) A method according to Claim 33, which is a computer based method wherein steps (a) through (c) are carried out under computer control.